ABSTRACT

[0053] A simulated slot electric motor having a permanent magnet rotor, a stator, and a flexible electronic motor control package is provided. The stator is composed of a magnetic flux tube and a plurality of field windings. The magnetic flux tube includes a plurality of ribbon coil segments that provide a path for the magnetic flux, generated during motor during operation. The multiple field windings are at least partially retained within the inside diameter of the magnetic flux tube, and are configured to be arranged within the magnetic flux tube without the use of conventional slots. In one embodiment, the electronic motor control package is modular, having a modular power supply circuit and a modular commutation control circuit. Preferably, the modules are of a plug and play type. A modular electronic motor control package provides unique flexibility allowing interchangeability for the required power and performance needed for a great variety of applications.